FINAL AS-ADMINISTERED ADMINISTRATIVE JPMS

FOR THE BRAIDWOOD INITIAL EXAMINATION - JULY 2002

Facility: **Braidwood Units 1 and 2**		Date of Examination: **07/08-19/02**
Examination Level (circle one): **RO**		Operating Test Number: **1**
	Administrative Topic/Subject Description	Describe method of evaluation: 1. ONE Administrative JPM, OR 2. TWO Administrative Questions
A.1	Conduct of Operations- Perform Unit Common Shiftly Daily Rounds	(new) (Simulator JPM) K/A 2.1.18 Imp Factor 2.9
	Conduct of Operations- Perform QPTR Calculation	N-18 (Simulator JPM) K/A 2.1.19 Imp Factor 3.0
A.2	Equipment Control- Perform 1CS007A Valve Stroke Surveillance	(new) (Simulator JPM) K/A 2.2.12 Imp Factor 3.0
A.3	Radiation Control- Perform RM-11 Setpoint Change for Rad Release	N-32 (Simulator JPM) K/A 2.3.11 Imp Factor 2.7
A.4	Emergency Plan- Activate Emergency Response Data System (ERDS)	N-160 (Simulator JPM) K/A 2.4.29 Imp Factor 2.6

Facility: **Braidwood Units 1 and 2** Date of Examination: **07/08-19/02**

Examination Level (circle one): **SRO** Operating Test Number: **1**

	Administrative Topic/Subject Description	Describe method of evaluation: 1. ONE Administrative JPM, OR 2. TWO Administrative Questions
A.1	Conduct of Operations- Review Calorimetric	S-42 (Modified Simulator JPM) K/A 2.1.7 Imp Factor 4.4
	Conduct of Operations- Review QPTR Calculation	(new) (Simulator JPM) K/A 2.1.33 Imp Factor 4.0
A.2	Equipment Control- Review BDPS Out of Service	(new) (Simulator JPM) K/A 2.2.13 Imp Factor 3.8
A.3	Radiation Control- Review a Release Package	S-41 (Modified Simulator JPM) K/A 2.3.6 Imp Factor 3.1
A.4	Emergency Plan- Classify and Screen Event for Reportability	S-05 (Simulator JPM) K/A 2.4.30 Imp Factor 3.6

Facility: **Braidwood Units 1 and 2** Date of Examination: **07/08-19/02**

Exam Level (circle one): **SRO** Operating Test Number: **1**

B.1 Control Room Systems

System / JPM Title	Type Code*	Safety Function
a. ECCS / Align RHR for Cold Leg Injection N-03 K/A 006A4.04 3.7/3.6	D, S L	3
b. EDG / Synchronize a SAT to a bus being fed by a Diesel N-84 K/A 064A4.09 3.2/3.3	D, S L	6
c. Emergency Boration / Perform Emergency Boration N-27C K/A 024AA1.17 3.9/3.9	M, A S, L	1
d. RCS / Excess Letdown Operations (new) K/A 002K1.06 3.7/4.0	N, A S	2
e. CCW / Respond to a RCP Thermal Barrier Leak N-118 K/A 008K1.04 3.3/3.3	D, A S	8
f. PRT/ Drain the Pressurizer Relief Tank N-119 K/A 007A1.01 2.9/3.1	D, S	5
g. SG / AFW Check Valve Leakage (new) K/A 035K1.01 4.2/4.5	N, A, S	4p

B.2 Facility Walk-Through

a. ESW / Align Fire Protection Cooling to CV Pump after loss of SX N-138 K/A 076AK3.03 4.0/4.2	N, R	4s
b. APE / Locally Align the Fire Hazzards Panel N-34 K/A 068AA1.03 4.1/4.3	D, R	7
c. ESF / Locally Reset Feedwater Isolation N-91 K/A 013A4.02 4.3/4.4	D	2

* Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrol room, (S)imulator, (L)ow Power, (R)CA

Facility: **Braidwood Units 1 and 2** Date of Examination: **07/08-19/02**

Exam Level (circle one): **RO** Operating Test Number: **1**

B.1 Control Room Systems

System / JPM Title	Type Code*	Safety Function
a. ECCS / Align RHR for Cold Leg Injection N-03 K/A 006A4.04 3.7/3.6	D, S L	3
b. EDG / Synchronize a SAT to a bus being fed by a Diesel N-84 K/A 064A4.09 3.2/3.3	D, S L	6
c. Emergency Boration / Perform Emergency Boration N-27C K/A 024AA1.17 3.9/3.9	M, A S, L	1
d. RCS / Excess Letdown Operations (new) K/A 002K1.06 3.7/4.0	N, A S	2
e. CCW / Respond to a RCP Thermal Barrier Leak N-118 K/A 008K1.04 3.3/3.3	D, A S	8
f. PRT/ Drain the Pressurizer Relief Tank N-119 K/A 007A1.01 2.9/3.1	D, S	5
g. SG / AFW Check Valve Leakage (new) K/A 035K1.01 4.2/4.5	N, A, S	4p

B.2 Facility Walk-Through

a. ESW / Align Fire Protection Cooling to CV Pump after loss of SX N-138 K/A 076AK3.03 4.0/4.2	N, R	4s
b. APE / Locally Align the Fire Hazzards Panel N-34 K/A 068AA1.03 4.1/4.3	D, R	7
c. ESF / Locally Reset Feedwater Isolation N-91 K/A 013A4.02 4.3/4.4	D	2

* Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrol room, (S)imulator, (L)ow Power, (R)CA

One applicant ran JPM B.1.c without an Alternate path due to a simulator setup problem. This same applicant performed a different Alternate path version of JPM B.1.f from that given to the other applicants, so as to have the correct number of alternate path JPMs.

Both versions of JPMs B.1.c and b.1.f are included in the following documents.

JOB PERFORMANCE MEASURE

TASK TITLE: **Review Calorimetric Surveillance**

JPM No.: **S-42a** REV: 1

TPO No.: IV.C.NI-05 K&A No.: (015A1.01)

TASK No.: NI-004 K&A IMP: 3.5 /3.8

TRAINEE:_____

EVALUATOR:_____ DATE:_____

The Trainee: PASSED _____ this JPM. TIME STARTED: _____

FAILED _____ TIME FINISHED: _____

CRITICAL ELEMENTS: **(*)3** JPM TIME:_____ MINUTES

CRITICAL TIME: **NA** APPROX COMPLETION TIME **10** MINUTES

EVALUATION METHOD:
__X__ PERFORM
_____ SIMULATE

LOCATION:
_____ IN PLANT
__X__ SIMULATOR

GENERAL REFERENCES:

1. 1BwOSR 3.3.1.2-1, Rev. 6, Unit 1 Power Range High Flux Setpoint Daily Channel Calibration (Computer Calorimetric).

MATERIALS:

Copy of Completed/Ready for review 1BwOSR 3.3.1.2-1.

TASK STANDARDS:

1. Perform review of calorimetric data collected by NSO.
2. Verify the adjustment of NI's is correct.
3. Demonstrates the use of good Core Work Practices (CWP).

TASK CONDITIONS:

1. You are the Unit Supervisor.
2. The Unit 1 is at 100% power, steady state.
3. Unit 2 is at 100% power.

INITIATING CUES:

1. The Unit NSO has completed the required calorimetric surveillance and has asked for your review per 1BwOSR 0.1-1,2,3.

Note: Hand examinee completed calorimetric D-2 data sheet #1, with the 4 page printout of the calorimetric results from the JPM. (pages 6-9)

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	N/A

RECORD START TIME _____

Note: This JPM is performed by having the examinee review the D-2 Data sheet from the surveillance. The first data sheet is complete through block 15 but has 1 mistake in it. The examinee must locate the mistake to pass the JPM prior to signing block 16, Review Authorization, and ending the JPM.

1.	Refer to completed 1BwOSR 3.3.1.2-1. **(CUE: Ensure D-2 Data Sheet #1 is handed to examinee with the printout of the calorimetric data.)** **All Prereqs were met**	Review the data sheet for completeness/errors for blocks 1 and 2: • Date: Today • Time: 10 minutes ago • Mwe Gross: Current (1257.0) • Control Bank Position: Current for C1 (228), C2 (228), D1 (215), D2 (215). • NSOs Signature.	☐	☐	☐
2.	Review blocks 3,10,11 and 12.	Review blocks 3,10,11 and 12 for completeness and/or errors: • Initial NIS Drawer Front Panel Meter Power filled in. • Calculated Calorimetric Power from printout filled in. • Calculated Power difference filled in. • Block 12 checked (3 NO, 1 YES)	☐	☐	☐

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	N/A
*3. Verify the calculation that determines to what power N-44 must be adjusted.	DETERMINE the power channel N-44 needs to be adjusted to as follows:	☐	☐	☐
	o Ensure the present percent power values are filled in block 13.			
	o VERIFY the corrected calculated power difference from block 11 in block 14.			
	o VERIFY/SUBTRACT the power difference from the present indicated power and the value as the Power to adjust the NIS channels to in block 15.			
(Note: If examinee discovers the N-44 mistake, and either wants the NSO to correct box 15 or wants to do it himself, cue the examinee to make the necessary correction on sheet D-2 himself and continue with the review.				
(Note: The examinee needs to verify the subtraction and determination of the indicated power the adjustments must result in for N-44.)	• Identify that the numbers were subtracted incorrectly (error) Correct answer should be 100.0%			
	• Sign the "Review Authorization", block 16 after correction is made to block 15.			
(Note: If the examinee has NOT identified and corrected the mistake (N-44) by the time he signs Block 16, "Review Authorization", and ends the JPM then the JPM performance is UNSAT.)				

(CUE:) THIS COMPLETES THIS JPM.

RECORD STOP TIME _____

COMMENTS:

UNIT ONE
COMPUTER CALORIMETRIC DATA SHEET

1. Date: 6/10/02 Time: 2000

2. MWe (gross): 1257.0 Control Bank Positions: C1 228 steps; C2 228 steps; D1 215 steps; D2 215 steps

ALL prerequisites have been satisfactorily addressed?: NSO Signature: [signature]

	3. INITIAL NIS Drawer Front Panel Meter Power	-	10. Calculated Calorimetric Power (From Printout)	=	11. Calculate Power Difference	12. Is an adjustment required? ["YES" if F.11 ≥ 2% (+ or -) or is negative when above P-8]
NR-41	100.5	-	100.0	=	0.5	☐ YES ☒ NO
NR-42	101.2	-	100.0	=	1.2	☐ YES ☒ NO
NR-43	100.1	-	100.0	=	0.1	☐ YES ☒ NO
NR-44	99.7	-	100.0	=	-0.3	☒ YES ☐ NO

	13. PRESENT NIS Drawer Front Panel Meter Power	-	14. Calculated Power Difference (F.11)	=	15. Power to Adjust NIS Channel to	16. Review Authorization	19. Was NIS Channel Satisfactorily Adjusted?
NR-41	NA		NA		NA		☐ YES ☐ NO
NR-42	NA		NA		NA		☐ YES ☐ NO
NR-43	NA		NA		NA	6-11-02	☐ YES ☐ NO
NR-44	99.7		-0.3		99.4 100.0		☐ YES ☐ NO

22. a. Printout reviewed by Shift Manager or Designee? ☐ YES ☐ NO
b. Printout attached on next data sheet? ☐ YES ☐ NO

— KEY —

BRAIDWOOD UNIT 1

TIME: 10 MINUTES AGO TEN MINUTE AVERAGE CALORIMETRIC DATE: TODAY

GROSS GENERATION: 1257.0 AVE NIS PR(%) 100.3

AVERAGE FEED WATER (DEGF) 443.21

	STEAM PRESS (PSIG)	NET FEEDWATER FLOW (KBH)	BLOWDOWN FLOW (GPM)	TEMPERING FLOW (KBH)	INITIAL NIS POWER(%)	LOOP THERMAL POWER (KBTU/HR)
LOOP 1:	998.1	4008.89	58.26	41.31	100.3	3055.8
LOOP 2:	997.6	4020.04	58.18	41.06	99.1	3064.4
LOOP 3:	997.2	4021.15	58.18	41.85	100.1	3065.3
LOOP 4:	998.5	4004.22	58.29	41.97	99.6	3052.1

SUM LOOP THERMAL POWER (KBTU/HR): .1224E 05

PERCENT POWER (%): 100.0

BRAIDWOOD UNIT 1

CALORIMETRIC PAGE #2

PREREQUISITE	TIME	TOLERANCE	AVERAGE	DEVIATION	SATISFIED?
#1 REACTOR POWER	5 MIN	+/- 0.5%	100.3	.0	YES
#2 SG 1A LEVEL	5 MIN	+/- 1.5%	60.0	.0	YES
#2 SG 1B LEVEL	5 MIN	+/- 1.5%	60.0	.0	YES
#2 SG 1C LEVEL	5 MIN	+/- 1.5%	60.0	.0	YES
#2 SG 1D LEVEL	5 MIN	+/- 1.5%	60.0	.0	YES
#3 SG 1A PRESS	5 MIN	+/- 1.0%	998.1	.0	YES
#3 SG 1B PRESS	5 MIN	+/- 1.0%	997.6	.0	YES
#3 SG 1C PRESS	5 MIN	+/- 1.0%	997.2	.0	YES
#3 SG 1D PRESS	5 MIN	+/- 1.0%	998.5	.0	YES
#4 NO ROD MOTION C	5 MIN	+/- 0.2%	228.0	0.0	YES
#4 NO ROD MOTION D	5 MIN	+/- 0.2%	216	0.0	YES
#5 S/G 1A BLWD FLOWS	5 MIN	+/- 10%	58.3	.0	YES
#5 S/G 1B BLWD FLOWS	5 MIN	+/- 10%	58.2	.0	YES
#5 S/G 1C BLWD FLOWS	5 MIN	+/- 10%	58.2	.0	YES
#5 S/G 1D BLWD FLOWS	5 MIN	+/- 10%	58.3	.0	YES

BRAIDWOOD UNIT 1

CALORIMETRIC PAGE #3

#6 FEEDWATER FLOW

SG 1A TAP SET	1	5 MIN	+/- 5.0%	488.2	.0	YES
SG 1A TAP SET	2	5 MIN	+/- 5.0%	487.6	.0	YES
SG 1B TAP SET	1	5 MIN	+/- 5.0%	491.0	.0	YES
SG 1B TAP SET	2	5 MIN	+/- 5.0%	489.1	.0	YES
SG 1C TAP SET	1	5 MIN	+/- 5.0%	487.2	.0	YES
SG 1C TAP SET	2	5 MIN	+/- 5.0%	485.9	.0	YES
SG 1D TAP SET	1	5 MIN	+/- 5.0%	477.2	.0	YES
SG 1D TAP SET	2	5 MIN	+/- 5.0%	481.9	.0	YES

#7 FEEDWATER TEMPERATURE

SG 1A	5 MIN	+/- 0.5%	443.2	.0	YES
SG 1B	5 MIN	+/- 0.5%	443.2	.0	YES
SG 1C	5 MIN	+/- 0.5%	443.2	.0	YES
SG 1D	5 MIN	+/- 0.5%	443.2	.0	YES

BRAIDWOOD UNIT 1

CALORIMETRIC PAGE #4

TIME: 10 MINUTES AGO CALORIMETRIC INPUT SCAN STATUS

0 OF 88 CALORIMETRIC INPUTS ARE OFF SCAN

SIMULATOR SETUP INSTRUCTIONS

JPM NO: S-42

REQUIRED SIMULATOR MODE(S): 100% power steady state

MALFUNCTION #'S: N/A

COMMENTS:

1) Since the data sheets are already filled in, no further set up is necessary.

TASK CONDITIONS:

1. You are the Unit Supervisor.
2. The Unit 1 is at 100% power, steady state.
3. Unit 2 is at 100% power.

INITIATING CUES:

2. The Unit NSO has completed the required calorimetric surveillance and has asked for your review per 1BwOSR 0.1-1,2,3.

JOB PERFORMANCE MEASURE

TASK TITLE: **Review a QPTR Calculation**

JPM No.: **S-02QPTR**

REV: 0

TPO No.: IV.C.RK-01

K&A No.: 2.1.33

TASK No.:

K&A IMP: 4.0

TRAINEE:_____

EVALUATOR:_____

DATE:_____

The Trainee: PASSED _____ this JPM.

FAILED _____

TIME STARTED: _____

TIME FINISHED: _____

CRITICAL ELEMENTS: **(*)7**

JPM TIME:_____ MINUTES

CRITICAL TIME: **NA**

APPROX COMPLETION TIME **15** MINUTES

EVALUATION METHOD:

__X__ PERFORM
_____ SIMULATE

LOCATION:

_____ IN PLANT
__X__ SIMULATOR

GENERAL REFERENCES:

1. 1BwOSR 3.2.4.1, Rev. 2, Unit One Quadrant Power Tilt Ratio (QPTR) Calculation.
2. Operator Aid for 100% Power NIS Detector Currents.

MATERIALS:

1. 1BwOSR 3.2.4.1
2. Operator Aid for current values to be used in QPTR Calculation.

TASK STANDARDS:

1. Review QPTR Surveillance (1BwOSR 3.2.4.1)

TASK CONDITIONS:

1. You are the Unit Supervisor.
2. The Unit is at 100% power.

INITIATING CUES:

1. The NSO has completed and handed you a copy of 1BwOSR 3.2.4.1 for you to review. The process computer and PDMS were inoperable for the purpose of this surveillance. The Shift Manager has directed you to perform an independent review based on the detector data that was taken.

NOTE: Hand examinee completed QPTR surveillance 1BwOSR 3.2.4.1 (D-3).

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	N/A

RECORD START TIME _____

Note: This JPM is performed by having the examinee review the Data Sheet D-3, Unit 1 QPTR calculation using NIS meters. The data sheet is complete but has one mistake in the calculation for Upper detector QPTR on N-42. The examinee must locate the error and determine the QPTR for channel N-42 is outside the acceptance criteria.

1.	Open and refer to 1BwOSR 3.2.4.1, QPTR Calculation. **(CUE: Ensure completed D-3 data sheet is handed to examinee.** **All prerequisites, Limitations and actions were met for the performance of this surveillance.** **The NIS Power Range Tilts alarm is OPERABLE.** **PDMS is inoperable. Surveillance is performed as a normal weekly.**	Open and refer to the provided copy of 1BwOSR 3.2.4.1. Review the applicable surveillance frequency for performance of this surveillance is once per 7 days: • PDMS is INOPERABLE • Rx Power is >50% • NIS Power Range Tilts alarm is OPERABLE • QPTR has been within limits (<1.02)	☐	☐	☐
2.	Review completed data sheet D-3 **(CUE: If asked, the Unit has NO LOCARs in progress at this time.**	Review data sheet D-3 for completeness/errors • Being completed once per normal interval • Date (Today) • Time (Now) • Channel reliable? (Y) • Instrument Readings properly recorded (100%)	☐	☐	☐
3.	Review Data sheet for present and 100% detector currents **(CUE: All present and 100% values of Upper and Lower Detector currents are accurate.**	Review Data sheet to ensure all present Upper and Lower Detector Currents are recorded as well as all 100% detector Upper and Lower currents.	☐	☐	☐

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	N/A
4. Review the calculations to obtain the normalized detector currents and compare them to the calculated values on the data sheet.	Review the Normalized Detector Currents for each detector by dividing its present detector current reading by the 100% detector current value • Each Upper • Each Lower	☐	☐	☐
5. Calculate and review the average normalized currents and compare them to the data sheet.	Review the Average Normalized Current by summing the upper (lower) normalized detector currents and dividing by 4 and compare this value to the Data Sheet: • Upper Average • Lower Average	☐	☐	☐
6. Calculate and review the QPTR for each detector and compare them to the QPTR listed on the data sheet.	Review the QPTR for each detector by dividing each Normalized Detector Current by the Average Normalized Current and and compare this value to the data sheet: • Each Upper • Each Lower	☐	☐	☐
*7. Identify N42 Upper Detector QPTR is unacceptable. **(CUE: As SM acknowledge the required initiation of LCO 3.2.4.)**	Identify N42 Upper Detector QPTR is >1.02 and is unacceptable. • Initiate LCO 3.2.4. o Inform SM of LCO entry requirement	☐	☐	☐

(CUE:) THIS COMPLETES THIS JPM.

RECORD STOP TIME _____

COMMENTS:

TASK CONDITIONS:

1. You are the Unit Supervisor.
2. The Unit is at 100% power.

INITIATING CUES:

2. The NSO has completed and handed you a copy of 1BwOSR 3.2.4.1 for you to review. The process computer and PDMS were inoperable for the purpose of this surveillance. The Shift Manager has directed you to perform an independent review based on the detector data that was taken.

SIMULATOR SETUP INSTRUCTIONS

JPM NO: S-02QPTR

REQUIRED SIMULATOR MODE(S): NA

MALFUNCTION #'S: N/A

COMMENTS: Key (Page 6) should be reviewed. Upper half date of this sheet (Data sheet D-3) is given to the operators as is to review. This contains the calculation error for N42 upper detector.

The lower half data contains the correct calculations **in bold type** with the error that must be discovered for N42 upper detector.

(KEY)

UNIT ONE

QUADRANT POWER TILT RATIO CALCULATION

NIS METERS

(KEY)

eing performed once per:

☒ 7 Days (normal interval) ☐ Shiftly

☐ 12 Hours (with BwVSR 3.2.4.2.) ☒ Other: PDMS inoperable

Date: TODAY	Time: NOW **(Data sheet given to SRO for review)**			
Channel	N41	N42	N43	N44
Is the channel operable?	☒Y ☐N	☒Y ☐N	☒Y ☐N	☒Y ☐N
Instrument reading	100%	100%	100%	100%
UPPER DETECTORS (A)				
Present upper detector current	192	187	190	185
100% upper detector current	194	181	192	186
Normalized detector current	.990	1.01	.990	.995
Average normalized current	.996			
Upper power tilt ratio (¢≤1.02)	¢ .994	¢ 1.01	¢ .994	¢ .999
LOWER DETECTORS (B)				
Present lower detector current	170	150	165	165
100% lower detector current	170	153	165	168
Normalized detector current	1.00	.980	1.0	.982
Average normalized current	.991			
Lower power tilt ratio (¢≤1.02)	¢ 1.01	¢ .989	¢ 1.01	¢ .991

Date:	Time: **(Data sheet with correct calculations – error on N-42)**			
Channel	N41	N42	N43	N44
Is the channel operable?	☒Y ☐N	☒Y ☐N	☒Y ☐N	☒Y ☐N
Instrument reading	100%	100%	100%	100%
UPPER DETECTORS (A)				
Present upper detector current	192	187	190	185
100% upper detector current	194	181	192	186
Normalized detector current	.990	**1.03**	.990	.995
Average normalized current	**1.00**			
Upper power tilt ratio (¢≤1.02)	**¢ .990**	**¢ 1.03**	**¢ .990**	**¢ .995**
LOWER DETECTORS (B)				
Present lower detector current	170	150	165	165
100% lower detector current	170	153	165	168
Normalized detector current	1.00	.980	1.00	.982
Average normalized current	.991			
Lower power tilt ratio (¢≤1.02)	¢ 1.01	¢ .989	¢ 1.01	¢ .991

Attach additional copies of this page as necessary.

PERFORMANCE CHECKLIST STANDARDS SAT UNSAT N/A

JOB PERFORMANCE MEASURE

TASK TITLE: Approve BDPS First Hang

JPM No.: S-02BDPS REV: 0

TPO No.: K&A No.: 2.2.13

TASK No.: K&A IMP: 3.8

TRAINEE: _____

EVALUATOR: _____ DATE: _____

The Trainee: PASSED _____ this JPM. TIME STARTED: _____

FAILED _____ TIME FINISHED: _____

CRITICAL ELEMENTS: **(*)5** JPM TIME: _____ MINUTES

CRITICAL TIME: **NA** APPROX COMPLETION TIME **11** MINUTES

EVALUATION METHOD:
__X__ PERFORM
_____ SIMULATE

LOCATION:
_____ IN PLANT
__X__ SIMULATOR

GENERAL REFERENCES:

1. 1BwOSR 3.9.2.1 Refueling BDPS Monthly Surveillance
2. 1BwOL 3.3.9 BDPS Tech Spec - Modes 3,4 or 5

MATERIALS:

Copy of BDPS First Hang Clearance Order

TASK STANDARDS:

1. Perform review of First Hang Clearance Order
2. Determine if Clearance Order is complete and ready to hang

TASK CONDITIONS:

1. You are the Unit Supervisor.
2. Unit 1 is in Mode 5.
3. Preparations are being made for Mode 6 entry next shift.
4. RWST boron concentration is 2350 ppm.

INITIATING CUES:

1. The Shift Manager has assigned you the review and 2Nd approver task for the BDPS First Hang Clearance Order for BDPS.

Note: When performing this JPM in the simulator, access to EWCS is not available. Normally, approvals are electronic via EWCS. This JPM will simulate the process.

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	N/A

Note: Hand BDPS first hang clearance order to examinee

RECORD START TIME _____

1.	Refer to completed First Hang Checklist (001) (#99006844)	Review First Hang for completeness/errors • Prepared By • 1st Approver • Special Instructions	☐	☐	☐
2.	Refer to Tech Spec 3.3.9 for applicability review	Locate and Open Tech Spec 3.3.9 • Review applicability for performing this First Hang • Applicable in Mode 6	☐	☐	☐
3.	Refer to Tech Spec 3.3.9 Basis document or 1BwOSR 3.9.2.1	Locate and Open Tech Spec 3.3.9 Basis or 1BwOSR 3.9.2.1 and Review for valves to be included and required valve positions.	☐	☐	☐
4.	Determine valves which must be secured closed	Determine the following valves are applicable and must be secured in the closed position • 1CV111B • 1CV8428 • 1CV8441 • 1CV8435 • 1CV8439	☐	☐	☐

*5.	Review First Hang for completeness and accuracy
	
	(Cue: After examinee identifies the clearance order is incomplete, ask what is missing if not provided by examinee.
	
	After the missing valves are identified, hand the missing sheet (page 2) to the examinee.
		• Determine the First Hang to be incomplete.
		• As US do NOT sign as 2nd Approver
		• Determine the following valves have not been included in the First Hang for BDPS
		  • 1CV8428
		  • 1CV8435
			☐	☐	☐

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	N/A
6. Approve the BDPS First Hang	Determine First Hang is now accceptable and verbalize approval.	☐	☐	☐

(CUE:) THIS COMPLETES THIS JPM.

RECORD STOP TIME _____

COMMENTS:

N-

TASK CONDITIONS:

1. You are the Unit Supervisor.
2. Unit 1 is in Mode 5
3. Preparations are being made for Mode 6 entry next shift
4. RWST Boron concentration is 2350 ppm.

INITIATING CUES:

1. The Shift Manager has assigned you the review and 2Nd approver task for the First Hang Clearance Order for BDPS.

N-

SIMULATOR SETUP INSTRUCTIONS

JPM NO: N-27B

REQUIRED SIMULATOR MODE(S): NA

MALFUNCTION #'S: N/A

COMMENTS:

REVIEW

FIRST HANG

:CKLIST: 001 **99006844** UNIT:

PAGE:

TAG:
ASMBLY/EQUIP: ALT TAG:

NAME: BDPS ADMIN
WORK DESC: BDPS ADMIN CONTROL PER TS 3.3.9

MC LOC: 01 A 24
PREPARED BY: D R MLADIC
1ST APPR: V R GUINTO
2ND APPR:

AUTH BY:

SPECIAL INST: PER 1BWOSR 3.9.2.1 REFUELING DILUTION PREVENTION VALVE POSITION MONTHLY SURVEILLANCE
APPLICABLE IN MODE 6 AND IS PERFORMED MONTHLY OR AS REQD BY LCOAR 1BWOL 3.3.9 IN MODES 3, 4, OR 5.

TECH SPEC :

HANG SEQ	HANG POS	HANG BY	HANG VER	ISOLATION POINT LOCATION & DESCRIPTION	LIFT SEQ	LIFT POS	LIFT BY	LIFT VER
HANG 001	NO-CARD N/A			**SPECIAL INSTRUCTIONS REVIEWED/COMPLETED**				
ECODE:				ECODE:				
HANG 002	C/O-CD CLOSED			**1PM05J-B2-254** **1CV111B C/S** **AB BLENDER INJECTION VLV TO VCT** 1PM05J				
ECODE: 0000390340				451 10 L AUX MCR ECODE:				
HANG 003	C/O-RD CLOSED			**1CV111B-I/A** **1CV111B I/A** **1CV111B I/A SUPPLY ISOL VLV** VCT VLV AISLE				
ECODE: 0000042900				426 16 Q AUX ECODE:				
HANG 004	C/O-RD L/C			**1CV8441** **EMERGENCY BORATION LINE FLUSHING WTR ISOL VLV** VCT VLV AISLE				
ECODE: 0000043843				426 16 Q AUX CVVLV ECODE:				
HANG 004	C/O-RD L/C			**1CV8439** **BA FCV TO VCT OUTLT HDR ISOL VLV** VCT VLV AISLE				
ECODE: 0000043852				426 16 Q AUX CVVLV ECODE:			1043	

**** END OF ISOLATION POINTS ****

REVIEW
FIRST HANG

3CKLIST: 001 **99006844** UNIT:

PAGE:

CLEARANCE ORDER HOLDERS:

Holder	Holder Name		Discipline	--Accepted---	----Released-----	Auth. By	Extension
BRWHS	SHEAR	W E	OP				2098

* * * * END OF REPORT * * * *

JOB PERFORMANCE MEASURE

TASK TITLE: **Review a Liquid Release Package.**

JPM No.: **S-41**

REV: 1

TPO No.: VIII.C.HP-001

K&A No.: (G2.3.6)

TASK No.: S-HP-001

K&A IMP: 2.1 / 3.1

TRAINEE: _____

EVALUATOR: _____

DATE: _____

The Trainee: PASSED _____ this JPM.

FAILED _____

TIME STARTED: _____

TIME FINISHED: _____

CRITICAL ELEMENTS: **(*) 3**

JPM TIME: _____ MINUTES

CRITICAL TIME: **N/A**

APPROX COMPLETION TIME **10** MINUTES

EVALUATION METHOD:

__X__ PERFORM
_____ SIMULATE

LOCATION:

_____ IN PLANT
__X__ SIMULATOR

GENERAL REFERENCES:

1. BwOP WX-501T1,Rev. 19, "Liquid Release Tank 0WX01T release Form."

MATERIALS: Copy of BwOP WX-501T1 (filled in through step E.11).

TASK STANDARDS:

1. Complete review of Operations section E of BwOP WX-501T1.
2. Demonstrates the use of good Core Work Practices.

TASK CONDITIONS:

1. You are the Control Room Supervisor.
2. All plant systems and controls are normal for the current plant conditions.

INITIATING CUES:

1. Liquid Release package paperwork L-02-049 is complete through step E.11, and is ready for your review.
2. The SM has directed you to review and sign section E as applicable, and inform him of the results of your review.

Note: Hand Section E of the partially completed package to the examinee.

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	N/A
RECORD START TIME _____				
1. Refer to partially completed BwOP WX-501T1, Section E.12.	Reads Step E.12, notices no signature (yet) and turns back to beginning of section E (page 19).	☐	☐	☐
2. Reviews steps E.1-7. **(CUE: Daily channel checks are completed. If asked, 0RE-PR001,PR010,and CW032 are Operable)**	Reviews steps E.1-7: • Step 1 time and date. • Step 2 signed and dated by CRS. • Steps 3 initialed • Steps 4 initialed and Low Flow circled • Steps 5&6 initialed and values filled in for alarm setpoints. • Step 7 initialed.	☐	☐	☐
*3. Determines step E.8 should be completed and is not. **(CUE: As SM, ask what is wrong with the paperwork. After the examinee states the interlock check for the low flow release path was not performed correctly, conclude the JPM.**	Review steps E.8 and E.9 Determines release may not be performed: • Step E.8 is NOT performed as required for Low Flow releases. o Step E.9 IS performed but should not be. o Steps E.8 and E.9 are swapped. Interlock checks performed on wrong component(s) for Low Flow release. • Informs SM release paperwork was not performed properly. • Does NOT sign step E.12.	☐	☐	☐

(CUE:) THIS COMPLETES THIS JPM.

RECORD STOP TIME _____

COMMENTS:

SIMULATOR SETUP INSTRUCTIONS

JPM NO: S-41

REQUIRED SIMULATOR MODE(S): 1.

MALFUNCTION #'S: N/A

COMMENTS:

1) The alarm setpoints and background values in the release package paperwork may be different than the numbers in the simulator. If they are and will invalidate this JPM, then an IC must be made that has the numbers the same as the paperwork. The numbers of concern are:

Page	Rad monitor	# on paperwork	Sim #
12.D.4	0RE-PR001	2.01E-5	1.60E-7
12.D.5	''	''	
15.D.7.a	''	''	1.60E-7
15.D.7.a	High stpt	1.31E-4	6.38E-4
15.D.7.a	Alert stpt.	6.56E-5	3.19E-4
15.D.7.b	chan 9 hi	1.31E-4	6.38E-4
15.D.7.b	chan 10 Al	6.56E-5	3.19E-4
16.D.8.a	0PR010 cur	8.12E-7	9.99E-7
16.D.8.a	High stpt	8.19E-6	1.20E-5
16.D.8.a	Alert stpt.	5.73E-6	5.8E-6
16.D.8.b	chan 9 hi	8.19E-6	1.20E-5
16.D.8.b	chan 10 Al	5.73E-6	5.8E-6
18.E.3.a	chan 9 Hi	8.19E-6	1.20E-4
18.E.3.b	chan 10 Al	5.73E-6	5.8E-6
18.E.4.a	chan 9 Hi	1.31E-4	6.38E-4
18.E.4.b	chan 10 Al	6.56E-5	3.19E-4

2) Ensure step E.8 filled out, and E.9 is N/A'd on copy given to examinee.

TASK CONDITIONS:

1. You are the Control Room Supervisor.
2. All plant systems and controls are normal for the current plant conditions.

INITIATING CUES:

1. Liquid Release package paperwork L-02-049 is complete through step E.11, and is ready for your review.
2. The SM has directed you to review and sign section E as applicable, and then inform him of the results of your review.

JOB PERFORMANCE MEASURE

TASK TITLE: **Classify and Screen an Event for Reportability**

JPM No.: **S-05** **REV: 12**

PO No.: IV.F.ZP-17 K&A No.: (2.4.30)

TASK No.: S-AM-102 K&A IMP: 2.2/3.6

TRAINEE:_____

EVALUATOR:_____ DATE:_____

The Trainee: PASSED _____ this JPM. TIME STARTED: _____

FAILED _____ TIME FINISHED: _____

CRITICAL ELEMENTS: **(*) 2, 3** JPM TIME:_____ MINUTES

CRITICAL TIME: **15 min for #2** APPROX COMPLETION TIME: **6** MINUTES

EVALUATION METHOD:
__X__ PERFORM
_____ SIMULATE

LOCATION:
_____ IN PLANT
_____ SIMULATOR

GENERAL REFERENCES:

1. Exelon Reportability Manual, Operations Decision Tree, LS-AA-1020
2. Braidwood EALs.

\TERIALS:

Copies of the references listed above.

TASK STANDARDS:

1. Classify the event per the Braidwood EALs W/I 15 minutes.
2. Determine all reporting requirements per the Exelon Reportability Manual.

TASK CONDITIONS:

1. You are the Unit 1 Unit Supervisor.
2. Unit 1 is in Mode 6 with refueling in progress.
3. All systems required to be operable in Mode 6 are functioning normally.

INITIATING CUES:

1. While supervising core alterations, the FH Supervisor was hit on the head by a piece of wood dropped from the top of the S/G shield wall. He was knocked unconscious and fell into the contaminated refueling cavity.
2. The injury requires medical attention and he is now enroute to St. Joseph Medical Center with a Rad Tech and an engineering assistant via Braidwood ambulance.
3. The SM directs you to evaluate for the Emergency Plan. CLASSIFY the event and DETERMINE ALL REPORTING REQUIREMENTS INCLUDING TIME LIMITS per the Bwd EALs, and the Exelon Reportability Manual.
4. **CLASSIFICATION** of the event is **TIME CRITICAL**. Time starts when you acknowledge you understand the cues as given and the task to be accomplished.

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	N/A
RECORD START TIME _____				
1. Refer to Exelon Reportability Manual and Braidwood EALs.	Locate and Open the following: • Exelon Reportability Manual. • Braidwood EALs.	☐	☐	☐
*2. Evaluate for GSEP. **(Note: Record time to classify:_____.** **Must be < 15 minutes from start time.)**	Using Braidwood EALs, Cold Initiating Conditions, determine the Emergency Plan classification: • Unusual Event HU7	☐	☐	☐
*3. Screen the event for Reportability.	Using the Exelon Reportability Manual decision Trees to determine: • Emergency Plan Activated - SAF 1.1. • SAF 1.1 requires notification of State and Local within 15 minutes; and NRC within 1 hour. • Transport to Medical Facility - SAF 1.1 and RAD 1.6. o RAD 1.6 requires notification of NRC within 4 hours. (However the 1 hr notification for SAF 1.1 takes precedence over the 4 hour notification, and no duplicate call is necessary.) o 30 day LER	☐	☐	☐

(CUE:) THIS COMPLETES THIS JPM.

RECORD STOP TIME _____

COMMENTS:

SIMULATOR SETUP INSTRUCTIONS

PM NO: S-05

REQUIRED SIMULATOR MODE(S): ANY

MALFUNCTION #'S: N/A

COMMENTS:

1) This JPM may be performed IN PLANT or in Simulator.

TASK CONDITIONS:

1. You are the Unit 1 Unit Supervisor.
2. Unit 1 is in Mode 6 with refueling in progress.
3. All systems required to be operable in Mode 6 are functioning normally.

INITIATING CUES:

1. While supervising core alterations, the FH Supervisor was hit on the head by a piece of wood dropped from the top of the S/G shield wall. He was knocked unconscious and fell into the contaminated refueling cavity.
2. The injury requires medical attention and he is now enroute to St. Joseph Medical Center with a Rad Tech and an engineering assistant via Braidwood ambulance.
3. The SM directs you to evaluate for the Emergency Plan. CLASSIFY the event and DETERMINE ALL REPORTING REQUIREMENTS INCLUDING TIME LIMITS per the Bwd EALs, and the Exelon Reportability Manual.
4. **CLASSIFICATION** of the event is **TIME CRITICAL**. Time starts when you acknowledge you understand the cues as given and the task to be accomplished.

PERFORMANCE CHECKLIST STANDARDS SAT UNSAT N/A

JOB PERFORMANCE MEASURE

TASK TITLE: Complete Unit Common Shiftly/Daily Surveillances

JPM No.: N-02SHDLY REV: 0

TPO No.: K&A No. 2.1.18

TASK No.: K&A IMP: 2.9

TRAINEE: _____

EVALUATOR: _____ DATE: _____

The Trainee: PASSED _____ this JPM. TIME STARTED: _____

FAILED _____ TIME FINISHED: _____

CRITICAL ELEMENTS: (*)5,9 JPM TIME: _____ MINUTES

CRITICAL TIME: N/A APPROX COMPLETION TIME 9 MINUTES

EVALUATION METHOD:
__X__ PERFORM
_____ SIMULATE

LOCATION:
_____ IN PLANT
__X__ SIMULATOR

GENERAL REFERENCES:

1. 0BwOSR 0.1-0 Unit Common All Modes/At All Times Shiftly and Daily Operating Surveillance

MATERIALS:

Copy of partially completed OBwOSR 0.1-0

TASK STANDARDS:

1. Perform actions necessary to complete shiftly/daily surveillances
2. Properly identify out of specification readings

TASK CONDITIONS:

1. You are the Unit NSO.
2. Unit 1 is in Mode 1
3. Complete the Unit Common Shiftly/Daily Operating Surveillance for Shift 1
4. Current time is 0430

INITIATING CUES:

1. The Admin NSO on Unit 1 has been assigned an emergent task to perform and did not complete the Unit Common Shiftly/Daily Operating Surveillances for shift 1. You have been assigned by the US to complete the Unit Common Shiftly/Daily surveillance, 0BwOSR 0.1-0.

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	N/A

RECORD START TIME _____

1.	Refer to 0BwOSR 0.1-0 **(CUE: Provide examinee partially completed copy of 0BwOSR 0.1-0)**	Locate and Open 0BwOSR 0.1-0	☐	☐	☐
2.	Verify Ultimate Heat Sink Operability (as found) OLI-CW041	Record Lake Water Level from OLI-CW041	☐	☐	☐
3.	Check Meteorological Monitoring Instrumentation (as found) OUR-EM001 (as found) OUR-EM012 (as found) OUR-EM001 (as found) OUR-EM012 (as found) OUR-EM002	Record Meteorological Monitoring Data: • 34' Wind Speed (OUR-EM001) • 203' Wind Speed (OUR-EM012) • 34' Wind Direction (OUR-EM001) • 203' Wind Direction (OUR-EM012 • Air Temp Delta T (OUR-EM002)	☐	☐	☐
4.	Check Radiological Effluent Monitoring Instrument (as found) OUR-CW032	Record Liquid Effluent Monitoring Inst • Station Blowdown (OUR-CW032)	☐	☐	☐
*5.	Verify Control Room Vent Operability **(91°F-93°F)** OTI-VC032	Record Control Room Temperature o CR Temp (OTI-VC032) • Identify temp reading above acceptance criteria • Red Circle log reading o Inform US of out of spec condition	☐	☐	☐

N-

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	N/A
6. Verify Aux Building Exhaust Operability (as found) OTI-VA033 (as found) OTI-VA034	Record Aux Bldg Exhaust Temperatures • Plenum 0A (OTI-VA033) • Plenum 0B (OTI-VA034)	☐	☐	☐
7. Verify CST Level (as found) 1LI-CD051A (as found) 2LI-CD051A	Record Condensate Storage Tank Level • 1LI-CD051A • 2LI-CD051A	☐	☐	☐
8. Verify surveillance completion	Review remainder of surveillance for completion. • Pages (D-2)-(D-10) • TRM 3.7.d.1 data attached • Unlocked fire door checks complete and attached	☐	☐	☐
*9. Complete Data Package Cover Sheet (Page D-1) **(CUE: Current time is 0435 if asked)**	Review and sign completed surveillance on NSO signature block under initial review (Page D-1) • Surveillance within acceptance criteria w/o reliance on a TS or TRM block - checks NO • US is informed of out of spec reading on CR temp if not informed earlier	☐	☐	☐

(CUE:) THIS COMPLETES THIS JPM.

RECORD STOP TIME _____

OMMENTS:

SIMULATOR SETUP INSTRUCTIONS

'PM NO: N-02SHDLY

REQUIRED SIMULATOR MODE(S):NA

OVERRIDES #'S:

Override MCR air temp meter OTI-VC032 (ZA00TIVC032) to 92°F

COMMENTS:

- Place Release in Progress sign up
- Need a supply of red pens out on back desk

TASK CONDITIONS:

1. You are the Unit NSO.
2. Unit 1 is in Mode 1
3. Complete the Unit Common Shiftly/Daily Operating Surveillance for Shift 1
4. Current time is 0430

INITIATING CUES:

1. The Admin NSO on Unit 1 has been assigned an emergent task to perform and did not complete the Unit Common Shiftly/Daily Operating Surveillances for shift 1. You have been assigned by the US to complete the Unit Common Shiftly/Daily surveillance, 0BwOSR 0.1-0.

N-

JOB PERFORMANCE MEASURE

TASK TITLE: **Perform a QPTR Calculation**

JPM No.: **N-18** REV: 10

TPO No.: IV.C.RK-01 K&A No.: (015A1.04)

TASK No.: RK-003 K&A IMP: 3.5/3.7

TRAINEE:_____

EVALUATOR:_____ DATE:_____

The Trainee: PASSED _____ this JPM. TIME STARTED: _____

FAILED _____ TIME FINISHED: _____

CRITICAL ELEMENTS: **(*) 4, 9** JPM TIME:_____ MINUTES

CRITICAL TIME: **NA** APPROX COMPLETION TIME **17** MINUTES

EVALUATION METHOD:
__X__ PERFORM
_____ SIMULATE

LOCATION:
_____ IN PLANT
__X__ SIMULATOR

GENERAL REFERENCES:

1. 1BwOSR 3.2.4.1, Rev. 2, Unit One Quadrant Power Tilt Ratio (QPTR) Calculation.
2. Operator Aid for 100% Power NIS Detector Currents.

MATERIALS:

1. 1BwOSR 3.2.4.1 (blank)
2. 1BwOSR 3.2.4.1 page D-3, partially completed. (Page 7 of this JPM).
3. Operator Aid for current values to be used in QPTR Calculation.

TASK STANDARDS:

1. Perform QPTR Surveillance (1BwOSR 3.2.4.1)
2. Demonstrates the use of good Core Work Practices (CWP).

TASK CONDITIONS:

1. You are an extra NSO.
2. The Unit 1 is at 100% power. PDMS is inoperable

INITIATING CUES:

1. The US has provided you a copy of and directed you to perform the weekly QPTR calculation using 1BwOSR 3.2.4.1. The process computer is inoperable for the purpose of this surveillance.

Note to Examiner: Step 4 of this JPM requires data from the NIS meters and Op Aid. This data should be gathered before the examinee starts this JPM. This data is to be compared to the data the examinee takes during the JPM to ensure he is within ± 10 uamps.

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	N/A
RECORD START TIME _____				
1. Open and refer to 1BwOSR 3.2.4.1, QPTR Calculation. **CUE: All Prerequisites, Precautions, Limitations and Actions have been met. Surveillance cover sheet is signed and dated)**	Open and refer to the provided copy of 1BwOSR 3.2.4.1. VERIFY all applicable Prerequisites, Precautions, and Limitations and Actions are satisfactorily addressed.	☐	☐	☐
2. Indicate the applicability of this surveillance on Data Sheet D-3.	Determine NIS meters must be used to perform this surveillance and INDICATE on Data Sheet D-3: • CHECK 7 day block. • RECORD current Date and Time.	☐	☐	☐
3. Record power range NIs operability status. **(CUE: If asked, the Unit is in No LCOARs at this time.)**	On Data Sheet D-3, RECORD the following for power range NIs 41-44: • 'Y' block checked for each channel indication reliable. • 100% (or present power reading from each channel at 1PM07J).	☐	☐	☐
*4. Record each present detector current reading from 1PM07J on Data Sheet D-3. **(Note: Prior to commencing this JPM, the actual readings should be logged here:** **UPPERS LOWERS** _____ **N41** _____ _____ **N42** _____ _____ **N43** _____ _____ **N44** _____ **Log Op Aid Data here:** _____ **N41** _____ _____ **N42** _____ _____ **N43** _____ _____ **N44** _____	All present Upper and Lower Detector Currents recorded within ± 10 uamps of actual values on Data Sheet D-3. UPPERS: • N41_____ • N42_____ • N43_____ • N44_____ LOWERS: • N41_____ • N42_____ • N43_____ • N44_____	☐ ☐	☐ ☐	☐ ☐

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	N/A
5. Record 100% Detector Currents from Operator Aid Book on data Sheet D-3. **(CUE: If asked as the SNE for the values, report that they are in the operator aid book.)**	Record the 100% Detector Currents from the Operator Aid Book for each upper and lower detector on Data Sheet D-3: • Each upper • Each Lower	☐	☐	☐

Note: After examinee has recorded the data to this point from 1PM07J, provide him/her with the partially filled in D-3 Data Sheet for calculations. (Page 7 of this JPM. Use the simulator setup instructions page 6 of this JPM for a 'KEY'.)

6. Using the partially filled in D-3 Data Sheet, perform the calculations to obtain the normalized detector currents and log them on the data sheet.	Calculate the Normalized Detector Currents for each detector by dividing its present detector current reading by the 100% detector current value from the operator aid and log on the D-3 Data Sheet: • Each Upper • Each Lower	☐	☐	☐
7. Using the partially filled in D-3 Data Sheet, perform the calculations to obtain the average normalized currents and log them on the data sheet.	Calculate the Average Normalized Current by summing the upper (lower) normalized detector currents and dividing by 4 and log on the D-3 Data Sheet: • Upper Average • Lower Average	☐	☐	☐
8. Using the partially filled in D-3 Data Sheet, perform the calculations to determine the QPTR for each detector and log them on the data sheet.	Determine the QPTR for each detector by dividing each Normalized Detector Current by the Average Normalized Current and log on the D-3 data sheet: • Each Upper • Each Lower	☐	☐	☐
*9. Identify N42 Upper Detector QPTR is unacceptable. **(CUE: As SM acknowledge the required initiation of LCOAR 1BwOL 3.2.4.)**	Identify N42 Upper Detector QPTR is >1.02 and is unacceptable. Immediately notify the Shift Manager or Designee to initiate LCOAR 1BwOL 3.2.4.	☐	☐	☐

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	N/A

(CUE:) THIS COMPLETES THIS JPM.

RECORD STOP TIME _____

COMMENTS:

SIMULATOR SETUP INSTRUCTIONS

KEY-

JPM NO: N-18

REQUIRED SIMULATOR MODE(S): 100% Steady State

MALFUNCTION #'S: N/A

COMMENTS: Use the following as a 'KEY' to check calculations:

Date: TODAY	Time: NOW			
Channel	N41	N42	N43	N44
Is the channel operable?	☐Y ☐N	☐Y ☐N	☐Y ☐N	☐Y ☐N
Instrument reading	100%	100%	100%	100%
UPPER DETECTORS (A)				
Present upper detector current	190	185	190	185
100% upper detector current	194	179	192	186
Normalized detector current	**.979**	**1.03**	**.990**	**.994**
Average normalized current	**.998**			
Upper power tilt ratio (¢≤1.02)	**¢ .980**	**¢ 1.03**	**¢ .990**	**¢ .996**
LOWER DETECTORS (B)				
Present lower detector current	170	150	165	165
100% lower detector current	170	153	165	168
Normalized detector current	**1.00**	**.980**	**1.0**	**.982**
Average normalized current	**.990**			
Lower power tilt ratio (¢≤1.02)	**¢ 1.01**	**¢ .989**	**¢ 1.01**	**¢ .991**

UNIT ONE
QUADRANT POWER TILT RATIO CALCULATION
NIS METERS

eing performed once per:

☐ 7 Days (normal interval) ☐ Shiftly
☐ 12 Hours (with BwVSR 3.2.4.2.) ☐ Other: _____

Date: TODAY	Time: NOW			
Channel	N41	N42	N43	N44
Is the channel operable?	☐Y ☐N	☐Y ☐N	☐Y ☐N	☐Y ☐N
Instrument reading	100%	100%	100%	100%
UPPER DETECTORS (A)				
Present upper detector current	190	185	190	185
100% upper detector current	194	179	192	186
Normalized detector current				
Average normalized current				
Upper power tilt ratio (¢≤1.02)	¢	¢	¢	¢
LOWER DETECTORS (B)				
Present lower detector current	170	150	165	165
100% lower detector current	170	153	165	168
Normalized detector current				
Average normalized current				
Lower power tilt ratio (¢≤1.02)	¢	¢	¢	¢

Date:	Time:			
Channel	N41	N42	N43	N44
Is the channel operable?	☐Y ☐N	☐Y ☐N	☐Y ☐N	☐Y ☐N
Instrument reading	%	%	%	%
UPPER DETECTORS (A)				
Present upper detector current				
100% upper detector current				
Normalized detector current				
Average normalized current				
Upper power tilt ratio (¢≤1.02)	¢	¢	¢	¢
LOWER DETECTORS (B)				
Present lower detector current				
100% lower detector current				
Normalized detector current				
Average normalized current				
Lower power tilt ratio (¢≤1.02)	¢	¢	¢	¢

Attach additional copies of this page as necessary.

TASK CONDITIONS:

1. You are an extra NSO.
2. The Unit 1 is at 100% power.

INITIATING CUES:

1. The US has provided you a copy of, and directed you to perform, the weekly QPTR calculation using 1BwOSR 3.2.4.1. However the process computer is inoperable only for the purpose of this surveillance.

JOB PERFORMANCE MEASURE

TASK TITLE: Perform Quarterly Valve Stroke Surveillance of 1CS007A

JPM No.: N-02CS007 REV: 0

TPO No.: K&A No. 2.2.12

TASK No.: K&A IMP: 3.0

TRAINEE: _____

EVALUATOR: _____ DATE: _____

The Trainee: PASSED _____ this JPM. TIME STARTED: _____

FAILED _____ TIME FINISHED: _____

CRITICAL ELEMENTS: **(*)6-10** JPM TIME: _____ MINUTES

CRITICAL TIME: N/A APPROX COMPLETION TIME **14** MINUTES

EVALUATION METHOD:
__X__ PERFORM
_____ SIMULATE

LOCATION:
_____ IN PLANT
__X__ SIMULATOR

GENERAL REFERENCES:

1. 1BwOSR 3.6.3.5.CS-1A Train A CS Containment Isolation Valve Stroke Quarterly Surveillance
2. Tech Spec 3.6.3 Containment Isolation Valves
3. Tech Spec 3.6.6 Containment Spray and Cooling Systems

MATERIALS:

Copy of 1BwOSR 3.6.5.CS-1A
Stop Watch

TASK STANDARDS:

1. Perform 1BwOSR 3.6.5.CS-1A, 1CS007A Valve Stroke Test

TASK CONDITIONS:

1. You are the Extra NSO.
2. Unit 1 is in Mode 5, Unit 2 is in Mode 1
3. RH suction pressure is 42 psig.

INITIATING CUES:

1. The Unit Supervisor has instructed you to perform 1BwOSR 3.6.5.CS-1A, Train A Containment Spray Containment Isolation Valve Stroke Quarterly Surveillance for 1CS007A. The concurrent surveillance for position indication (1BwOSR 5.5.8.CS-2A) is not going to be performed at this time.

RECORD START TIME _____

1.	Refer to 1BwOSR 3.6.5.CS-1A **(CUE: All prereqs, precautions, limitations and actions are met)** **(If asked) The surveillance cover sheet has been signed and approved by the US.**	Locate and Open 1BwOSR 3.6.5.CS-1A • Review Prerequisites, Precautions, Limitations and Actions	☐	☐	☐
2.	Review initial conditions **(CUE: The IST coordinator is listed on the Work Description Section for results review)**	Locate and review initial conditions, step 1 Verify the IST coordinator is listed on the Work Description Section for review.	☐	☐	☐
3.	Record the stopwatch Data **(CUE: Stopwatch data: Dept: Ops If asked: Accuracy Check date:7/13/02 Due Date: 8/15/02**	Record stopwatch data: **Step may be marked as NA** • Dept: o Accuracy Check Date: o Due Date:	☐	☐	☐
4.	Record as found conditions **(CUE: RH Suction pressure 42#**	Circle the as found condition of listed equipment: • 1SI001A - NA • 1CS001A - OPEN • 1CS007A - CLOSED • 1A CS pump - PTL • 1A CS TEST - NORMAL	☐	☐	☐
5.	LOCAR 3.6.6 is not entered **(CUE: LCO is not being entered for Train A CS)**	LCO 3.6.6 for 1A CS Train is not entered / is not applicable in mode 5	☐	☐	☐

N-

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	N/A
*6. Take action to disable Train A of CS from auto actuations	At 1PM06J perform the following: o Verify C/S for 1A CS pump to PTL o Verify 1A CS pump test switch in Normal • Close 1A CS pump suction 1CS001A	☐	☐	☐
*7. Open 1CS007A and record stroke time:	Stroke and time 1CS007A: • Place MCB C/S for 1CS007A to OPEN and simultaneously start the stopwatch. • Stop the stopwatch when 1CS007A indicates full open • Record stroke time in step 2.0 data table • If >10sec then identify inoperable and notify US o Check status light	☐	☐	☐
*8. Close 1CS007A and record stroke time:	Stroke and time 1CS007A: • Place MCB C/S for 1CS007A to CLOSE and simultaneously start the stopwatch. • Stop the stopwatch when 1CS007A indicates full closed • Record stroke time in step 2.0 data table • IF >12sec then identify inoperable and notify US o Check Status Light	☐	☐	☐
*9. Review stroke time and Tech Spec requirements	Record and review stroke times on acceptance data sheet. Verify acceptance criteria met or notify US if not met.	☐	☐	☐

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	N/A
*10. Restore system to 'as found' condition.	At 1PM06J perform/verify the following: o 1A CS Pump PTL o 1SI001A N/A • 1CS001A OPEN • 1CS007A CLOSED o 1CS01PA Test Switch NORMAL	☐	☐	☐

(CUE:) THIS COMPLETES THIS JPM.

RECORD STOP TIME _____

COMMENTS:

SIMULATOR SETUP INSTRUCTIONS

'PM NO: N-01CS007

REQUIRED SIMULATOR MODE(S): (5) CS Pumps in PTL

MALFUNCTION #'S: NA

COMMENTS: Need stop watch from instructors booth

TASK CONDITIONS:

1. You are the Unit NSO.
2. Unit 1 is in Mode 5, Unit 2 is in Mode 1
3. RH suction pressure is 42 psig.

INITIATING CUES:

1. The Unit Supervisor has instructed you to perform 1BwOSR 3.6.5.CS-1A, Train A Containment Spray Containment Isolation Valve Stroke Quarterly Surveillance for 1CS007A. The concurrent surveillance for position indication (1BwOSR 5.5.8.CS-2A) is not going to be performed at this time.

JOB PERFORMANCE MEASURE

TASK TITLE: **Prepare/Perform a Liquid Radwaste Release**

JPM No.: **N-32**

REV: **12**

TPO No.: IV.C.WQ-01

K&A No.: (068A4.02)

TASK No.: WX-002

K&A IMP: 3.2/3.1

TRAINEE: _____

EVALUATOR: _____

DATE: _____

The Trainee: PASSED _____ this JPM.

FAILED _____

TIME STARTED: _____

TIME FINISHED: _____

CRITICAL ELEMENTS: **(*) 5-7**

JPM TIME: _____ MINUTES

CRITICAL TIME: **NA**

APPROX COMPLETION TIME: **16** MINUTES

EVALUATION METHOD:

__X__ PERFORM
_____ SIMULATE

LOCATION:

_____ IN PLANT
__X__ SIMULATOR

GENERAL REFERENCES:

1. BwOP WX-501T1 Rev. 19, Liquid Release Tank 0WX01T Release Form

MATERIALS:

Copy of BwOP WX-501T1, Liquid Release Tank 0WX01T Release Form completed through section D.

TASK STANDARDS:

1. Complete Section E of a liquid release tank release form in accordance with BwOP WX-501T1.
2. Correctly operate the RM-11 for setpoint adjustment/testing.
3. Demonstrates the use of good Core Work Practices.

TASK CONDITIONS:

1. You are an extra NSO.
2. Both Units are at 100% power.
3. 0PR01J, 0PR10J, and 0UR-CW032 are operable.
4. All Channel Checks are complete.

INITIATING CUES:

1. The Unit Supervisor has handed you an 0WX01T liquid release package, completed through section D, and has directed you to complete the release package through Section E, using the HIGH flowrate path.

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	N/A

RECORD START TIME _____

Note: Provide the examinee with a copy of BwOP WX-501T1 completed through Section D, page 18. Provide cues to the examinee only if actual equipment is unavailable. When requested by the examinee, Independent Verification has been completed.

1.	Indicate the release flow path as HIGH FLOW, by circling on the form. **(Note: HIGH Flow Rate was given as an initiating cue.)**	Indicate the release flow path as HIGH FLOW by circling on the release form.	☐	☐	☐
2.	Obtain and record the High Alarm and Alert Alarm Setpoints for 0RE-PR010 from the RM-11. **(Chan Item #9 _____)** **(Chan Item #10 _____)**	Obtain and record the High Alarm and Alert Alarm Setpoints for 0RE-PR010 from the RM-11 as follows: • DEPRESS Grid 1 key. • Key in "110". • DEPRESS SEL key. • DEPRESS CHAN ITEMS key. • RECORD Chan Item #9, High Alarm Setpoint. • RECORD Chan Item #10, Alert Alarm Setpoint.	☐	☐	☐
3.	Obtain and record the High Alarm and Alert Alarm Setpoints for 0RE-PR001 from the RM-11. **(Chan Item #9 _____)** **(Chan Item #10 _____)**	Obtain and record the High Alarm and Alert Alarm Setpoints for 0RE-PR001 from the RM-11 as follows: • DEPRESS Grid 1 key. • Key in "101". • DEPRESS SEL key. • DEPRESS CHAN ITEMS key. • RECORD Chan Item #9, High Alarm Setpoint. • RECORD Chan Item #10, Alert Alarm Setpoint.	☐	☐	☐

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	N/A
4. Verify 0BwOSR 0.1-0 daily channel check is complete on Liquid Radwaste Effluent monitor (0RE-PR001), Station Blowdown Monitor (0RE-PR010), and Station Blowdown Line Monitor Loop (0-CW032). **(CUE: As examinee asks for status of surveillances, report they are all completed SAT as of shift 1 today.)**	Check rounds to ensure OBwOS 0.1-0 daily channel check surveillance is complete on the following: • 0RE-PR001 Liquid Radwaste Effluent. • 0RE-PR010 Station Blowdown. • 0-CW032 Station Blowdown Line Monitor Loop.	☐	☐	☐
*5. Perform lineup in preparation to verify valve 0AOV-WX353 auto closes on high radiation. **(CUE: As asked, sufficient blowdown flow is established;** **WX-302 and 890 are CLOSED;** **WX889 is OPEN;** **Release Tank Pump is running;** **The discharge hdr hi rad alarm is clear;** **0AOV-WX353 is OPEN using the key.)**	Contact Radwaste to prepare to verify 0AOV-WX353 Auto closes on high radiation as follows: o VERIFY sufficient blowdown flow is established. • VERIFY/CLOSE 0AOV-WX302. • VERIFY/CLOSE 0AOV-WX890. • VERIFY/OPEN 0AOV-WX889. • VERIFY/START 0WX01P, Release Tank pump. o VERIFY/CLEAR Release Tank Discharge Header Radiation High annunciator. • OPEN 0AOV-WX353 using the key obtained from the OPS Supervisor or SM.	☐	☐	☐

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	N/A
*6. Verify the Auto Closure of the release tank discharge isolation valve 0AOV-WX353.	Verify the Auto Closure of 0AOV-WX353 by LOWERING the liquid radwaste effluent monitor 0RE-PR001 High alarm setpoint to a value below the current activity level as follows: • PLACE the RM-11 console in the SUPERVISOR mode. • SELECT the HIGH alarm setpoint (channel item #9) to be changed on 0RE-PR001 (0PS101) CHAN ITEMS by keying in 9 and DEPRESSING the SEL key.	☐	☐	☐
(Current activity setting_____)	o Record the current activity reading. • ENTER a new HIGH alarm setpoint below the current activity value.			
(New Hi Alarm setting_____)	o RECORD the new HIGH alarm setpoint that was entered. • DEPRESS the ENTER key. o ACKNOWLEDGE the alarm at the RM-11 console.			
(CUE: When contacted report 0AOV-WX353 Auto Closed, The high rad alarm annunciated, and (when directed) the key locked switch for 0AOV-WX353 is in CLOSE.)	Contact the local operator to: • VERIFY 0AOV-WX353 AUTO CLOSES. o VERIFY Release Tank discharge Header Radiation High alarm annunciates. • PLACE key locked switch for 0AOV-WX353 in CLOSE.	☐	☐	☐

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	N/A
*7. VERIFY/ADJUST the Alert and High alarm setpoints for 0RE-PR001 to the values specified by Health Physics is step D.7.b. **(CUE: When asked, Independent Verification is complete.)**	VERIFY/ADJUST the ALERT alarm and HIGH alarm setpoints to the values specified by Health Physics in step D.7.b as follows: • PLACE the RM-11 Console in the SUPERVISOR mode. • SELECT the ALERT alarm setpoint (channel item #10) to be changed on the 0RE-PR001 (0PS101) CHAN ITEMS display by KEYING in 10 and DEPRESSING the SEL key. • ENTER the new ALERT alarm setpoint (656-5) and DEPRESS the ENTER key. **(3.19E-4)** • SELECT the HIGH alarm setpoint (channel item #9) to be changed on the 0RE-PR001 (0PS101) CHAN ITEMS display by KEYING in 9 and DEPRESSING the SEL key. • ENTER the new HIGH alarm setpoint (131-4) and DEPRESS the ENTER key. **(6.38E-4)** o INDEPENDENT VERIFICATION obtained.	☐	☐	☐
8. Contact the radwaste operator and VERIFY/CLEAR Release Tank Discharge Header Radiation High annunciator. **(CUE: When asked, Release Tank Discharge Header Radiation High annunciator is clear.)**	Contact the radwaste operator and VERIFY/CLEAR Release Tank Discharge Header Radiation High annunciator. • Window 77A09 at 0PL01J.	☐	☐	☐

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	N/A
9. VERIFY/ADJUST the ALERT and HIGH setpoints for 0RE-PR010 to the values specified by Health Physics is step D.8.b. **(Note: This step is NOT required (because there were no changes to these setpoints), but is included here in case the examinee performs it anyway.)**	VERIFY/ADJUST the ALERT alarm and HIGH alarm setpoints to the values specified by Health Physics in step D.8.b as follows: • SELECT the ALERT alarm setpoint (channel item #10) to be changed on the 0RE-PR010 (0PS110) CHAN ITEMS display by KEYING in 10 and DEPRESSING the SEL key. • ENTER the new ALERT alarm setpoint (573-6) and DEPRESS the ENTER key. **(5.80E-6)** • SELECT the HIGH alarm setpoint (channel item #9) to be changed on the 0RE-PR010 (0PS110) CHAN ITEMS display by KEYING in 9 and DEPRESSING the SEL key. • ENTER the new HIGH alarm setpoint (819-6) and DEPRESS the ENTER key. **(1.20E-5)** • PLACE the RM-11 console in the NORMAL mode. • INDEPENDENT VERIFICATION obtained.	☐	☐	☐
(CUE: When asked, INDEPENDENT VERIFICATION is complete.)				
10. Record Circulating Water Blowdown rate and obtain verifications. **(CUE: When asked for verifications/ reviews, they are complete.)**	Obtain/Record the following: • Circ Water Blowdown rate from 0UR-CW032 at 0PM01J, or computer point F2400. • SUPERVISOR VERIFICATION. • VERIFY CW blowdown rate $\geq$ 8000 gpm. • Control Room Supervisor Review.	☐	☐	☐

(CUE:) THIS COMPLETES THIS JPM.

RECORD STOP TIME _____

COMMENTS:

SIMULATOR SETUP INSTRUCTIONS

PM NO: N-32

REQUIRED SIMULATOR MODE(S): ANY

MALFUNCTION #'S: N/A

COMMENTS:

1) BwOP WX-501T1 needs to be filled out through section D.

2) Verify/Start 0WX01P on SDG WD5 (RF WD12 ON).

3) if contacted as radwaste operator, report:
-adequate blowdown flow
-0WX353 is CLOSED
-0WX890 is CLOSED
-0WX389 is OPEN
-Release Tank pump is started
-Release Tank discharge Header Rad High annun is CLEAR.

4) When contacted as radwaste operator, report 0WX353 is OPEN.

5) When contacted as radwaste operator, report 0WX353 is CLOSED.

6) When contacted as RWO, report the Release Hdr Rad High Alarm is in and has been acknowledged.

7) When contacted as RWO, report the high rad alarm is CLEAR.

TASK CONDITIONS:

1. You are an extra NSO.
2. Both Units are at 100% power.
3. 0PR01J, 0PR10J, and 0UR-CW032 are operable.
4. All Channel Checks are complete.

INITIATING CUES:

1. The Unit Supervisor has handed you an 0WX01T liquid release package, completed through section D, and has directed you to complete the release package through Section E, using the HIGH flowrate path.

JOB PERFORMANCE MEASURE

TASK TITLE: **Activate the Emergency Response Data System (ERDS).**

JPM No.: **N-160** REV: 0

TPO No.: IV.F.ZP-04 K&A No.: (2.4.29)

TASK No.: ZP-007 K&A IMP: 2.6 / 4.0

TRAINEE:_____

EVALUATOR:_____ DATE:_____

The Trainee: PASSED _____ this JPM. TIME STARTED: _____

FAILED _____ TIME FINISHED: _____

CRITICAL ELEMENTS: **(*) 2,3** JPM TIME:_____ MINUTES

CRITICAL TIME: **N/A** APPROX COMPLETION TIME **11** MINUTES

EVALUATION METHOD:
__X__ PERFORM
_____ SIMULATE

LOCATION:
_____ IN PLANT
__X__ SIMULATOR

GENERAL REFERENCES:

1. EP-MW-110-100 "ERO Computer Applications"

MATERIALS: Copy of EP-MW-110-100, Attachment 1.
PC with ERO Applications.

TASK STANDARDS:

1. Activate the electronic data link (ERDS).
2. Demonstrates the use of good Core Work Practices.

TASK CONDITIONS:

1. You are an extra NSO.
2. The Emergency Response Data System (ERDS) is not yet activated.

INITIATING CUES:

1. Plant conditions changed resulting in an upgrade of the Emergency classification from Unusual Event to Alert.
2. The Shift Manager has directed you to activate the Emergency Response Data System per EP-MW-110-100.

Examiner's Note: Do Not allow examinee to select REAL Mode. See note next page.

PERFORMANCE CHECKLIST	STANDARD	SAT	UNSAT	N/A

RECORD START TIME _____

Note: To prevent actual activation of the ERDS, when the examinee gets to the point of selecting the mode (REAL or EXERCISE) for ERDS activation, ask which mode he would select. (Correct answer is REAL). Cue the examinee to select EXERCISE.

1.	Refer to EP-MW-110-100	Locate and Open • EP-MW-110-100	☐	☐	☐
*2.	Refer to EP-MW-110-100 **(CUE: Ask which mode examinee intends to select prior to actual selection, cue the examinee to select EXERCISE Mode.)**	Perform the following from PC keyboard: • START MENU • SITE APPS • ERO Applications o ANSWER Question REAL • SELECT EXERCISE Mode	☐	☐	☐
*3.	Select ERDS Icon. **(Note: Attachment 1 Starts here**	Perform the following to activate ERDS: • SELECT ERDS Icon • At the next screen, SELECT Braidwood Station. • Click OK. • At the next screen, enter the password "SCOUT". • Click OK. • Click box labeled 'Turn On' o Compare the status of ERDS programs on the screen to verify ERDS is on for the appropriate unit(s).	☐	☐	☐

(CUE:) THIS COMPLETES THIS JPM.

RECORD STOP TIME _____

COMMENTS:

SIMULATOR SETUP INSTRUCTIONS

JPM NO: N-160

REQUIRED SIMULATOR MODE(S): Any

MALFUNCTION #'S: N/A

COMMENTS:

1) Ensure PC is operable and connectable to the GSEP Suite with ERDS OFF for Braidwood.
2) Go into the program and select any station but Braidwood.
3) When using this JPM multiple times, ensure ERDS is off prior to each start of the JPM. It must be "turned off" with the program button.

TASK CONDITIONS:

1. You are an extra NSO.
2. The Emergency Response Data System (ERDS) is not yet activated.

INITIATING CUES:

1. Plant conditions changed resulting in an upgrade of the Emergency classification from Unusual Event to Alert.
2. The Shift Manager has directed you to activate the Emergency Response Data System for Unit 1 per EP-MW-110-100.